

Listing of Claims:

1. (Currently Amended) A process for preparing rigid urethane-modified polyisocyanurate foam comprising the step of reacting an organic polyisocyanate with a polyfunctional isocyanate-reactive component comprising at least 30 wt % of polyester polyols in the presence of a blowing agent, selected from the group consisting of water, an alkane, an alkene, a cycloalkane, or combinations thereof, alkanes, alkenes, and cycloalkanes and when the blowing agent is selected from an alkane, an alkene, or a cycloalkane, then the blowing agent consists of carbon and hydrogen atoms, each having from 4 to 8 carbon atoms, a urethane catalyst, and a metal salt trimerisation catalyst characterized in that the process is carried out in the presence of a carboxylic acid that is functionalised with at least one OH, SH, NH₂, NHR, NO₂ or halogen functional group and R is an alkyl, cycloalkyl or aryl group, wherein the urethane catalyst is used in an amount ranging from 0.1 to 3.5 % by weight based on the isocyanate-reactive component and the metal salt trimerisation catalyst is used in an amount ranging from 0.4 to 4.5 % by weight based on the isocyanate-reactive component, and wherein the polyisocyanurate foam has a flame spread of not more than about 13 cm.
2. (Original) The process according to claim 1 wherein the carboxylic acid has a molecular weight below 250.
3. (Original) The process according to claim 1 wherein the carboxylic acid has a pKa value in water of between 1 and 5.5.
4. (Original) The process according to claim 2 wherein the carboxylic acid has a pKa value in water of between 1 and 5.5.
- 5-8. (Cancelled)
9. (Previously Presented) The process according to claim 1 wherein the carboxylic acid is functionalised in α or β position with respect to the carboxyl group.
10. (Cancelled)

11. (Previously Presented) The process according to claim 9 wherein said functionalised carboxylic acid corresponds to the general formula $X_n - R' - COOH$ wherein X is OH, SH, NH₂, NHR, NO₂ or halogen, R' is an at least divalent hydrocarbon moiety, n is an integer having a value of at least 1 and allows for mono and polyfunctional substitution on the hydrocarbon moiety.

12-17 (Cancelled)

18. (Original) The process according to claim 1 wherein said carboxylic acid is used in an amount ranging from 0.05 to 5 % by weight based on the isocyanate-reactive component.

19. (Previously Presented) The process according to claim 2 wherein said carboxylic acid is used in an amount ranging from 0.1 to 2 % by weight based on the isocyanate-reactive component.

20-21 (Cancelled)

22. (Previously Presented) The process according to claim 1 wherein the metal salt trimerisation catalyst is an alkali metal salt of an organic carboxylic acid.

23. (Previously Presented) The process according to claim 2 wherein the metal salt trimerisation catalyst is an alkali metal salt of an organic carboxylic acid.

24. (Original) The process according to claim 23 wherein the metal salt trimerisation catalyst is potassium acetate or potassium 2-ethylhexanoate.

25. (Cancelled)

26. (Original) The process according to claim 1 wherein the reaction is carried out at an isocyanate index of 150 to 450 %.

27. (Cancelled)

28. (Currently Amended) A rigid urethane-modified polyisocyanurate foam having a ~~flame spread not more than about 13 cm~~, the foam obtained by reacting an organic polyisocyanate with a polyfunctional isocyanate-reactive component comprising at least 30 wt % of polyester polyols in the presence of a blowing agent, selected from the group consisting of water, an alkane, an alkene, a cycloalkane, or combinations thereof, alkanes, alkenes, and cycloalkanes, and when the blowing agent is selected from an alkane, an alkene, or a cycloalkane, then the blowing agent consists of carbon and hydrogen atoms, each having from 4 to 8 carbon atoms, a urethane catalyst, and a metal salt trimerisation catalyst characterized in that the process is carried out in the presence of a carboxylic acid functionalised with at least one OH, SH, NH₂, NHR, NO₂, or halogen functional group, wherein R is an alkyl, cycloalkyl or aryl group, wherein the urethane catalyst is used in an amount ranging from 0.1 to 3.5 % by weight based on the isocyanate-reactive component and the metal salt trimerisation catalyst is used in an amount ranging from 0.4 to 4.5 % by weight based on the isocyanate-reactive component.

29. (Cancelled)

30. (Currently Amended) A process for preparing rigid urethane-modified polyisocyanurate foam comprising the step of reacting an organic polyisocyanate with a polyfunctional isocyanate-reactive component comprising at least 30 wt % of polyester polyols in the presence of a blowing agent and a metal salt trimerisation catalyst characterized in that the process is carried out in the presence of a functionalised carboxylic acid having at least one OH, SH, NH₂, NHR, NO₂, or halogen functional group, wherein R is an alkyl, cycloalkyl or aryl group and the metal salt trimerisation catalyst is used in an amount ranging from 0.5 to 5 % by weight based on the isocyanate-reactive component and the functionalised carboxylic acid is used in an amount ranging from 0.1 to 2 % by weight based on the isocyanate-reactive component; and wherein the blowing agent is selected from the group consisting of water, an alkane, an alkene, and a

cycloalkane, or combinations thereof, and when the blowing agent is selected from an alkane, an alkene, or a cycloalkane, then the blowing agent consists of carbon and hydrogen atoms, and wherein the polyisocyanurate foam has a flame spread of not more than about 13 cm.

31. (Previously Presented) The process according to claim 30 wherein water is also present in an amount less than 1 % by weight based on the isocyanate-reactive component.

32. (Cancelled)

33. (Cancelled)

34. (Cancelled)

35. (Previously Presented) The process according to claim 28 wherein the carboxylic acid is functionalised in α or β position with respect to the carboxyl group.

36. (Previously Presented) The process according to claim 28 wherein the carboxylic acid corresponds to the general formula $X_n - R' - COOH$ wherein X is OH, SH, NH₂, NHR, NO₂ or halogen, R' is an at least divalent hydrocarbon moiety, n is an integer having a value of at least 1 and allows for mono and polyfunctional substitution on the hydrocarbon moiety.

37. (New) The process according to claim 1, wherein the blowing agent is selected from an alkane, an alkene, a cycloalkane, or combinations thereof.

38. (New) The process according to claim 37, wherein the blowing agent is selected from the group of n-butane, iso-butane, 2,3-dimethylbutane, cyclobutane, n-pentane, iso-pentane, technical grade pentane mixtures, cyclopentane, methylcyclopentane, neopentane, n-hexane, iso-hexane, n-heptane, iso-heptane, cyclohexane, methylcyclohexane, 1-pentene, 2-methylbutene, 3-methylbutene, 1-hexene, and mixtures thereof.

39. (New) The process according to claim 28, wherein the blowing agent is selected from an alkane, an alkene, a cycloalkane, or combinations thereof.

40. (New) The process according to claim 39, wherein the blowing agent is selected from the group of n-butane, iso-butane, 2,3-dimethylbutane, cyclobutane, n-pentane, iso-pentane, technical grade pentane mixtures, cyclopentane, methylcyclopentane, neopentane, n-hexane, iso-hexane, n-heptane, iso-heptane, cyclohexane, methylcyclohexane, 1-pentene, 2-methylbutene, 3-methylbutene, 1-hexene, and mixtures thereof.

41. (New) The process according to claim 30, wherein the blowing agent is selected from an alkane, an alkene, a cycloalkane, or combinations thereof.

42. (New) The process according to claim 41, wherein the blowing agent is selected from the group of n-butane, iso-butane, 2,3-dimethylbutane, cyclobutane, n-pentane, iso-pentane, technical grade pentane mixtures, cyclopentane, methylcyclopentane, neopentane, n-hexane, iso-hexane, n-heptane, iso-heptane, cyclohexane, methylcyclohexane, 1-pentene, 2-methylbutene, 3-methylbutene, 1-hexene, and mixtures thereof.